

Abstract

[0090] A system and process for gas assisted plastic injection molding, particularly of hollow tubular components. The plastic material is injected into the mold cavity through an apex of a cone-shaped inlet configuration. After the molding pressure is held for a period of time, gas is injected into the plastic material and pressure is again held for a period of time, a valve member is opened allowing plastic to be expelled into a secondary cavity. The flow of the plastic and gas are controlled in an axial direction in order to prevent turbulence. The gas flow axially along the center of the tubular member allows the expulsion of plastic from the center uniformly along the length of the tube. In an alternative process, the gas is displaced axially into the barrel of the injection molding machine.